# What if Output Persistence is Disregarded by an Opportunistic Incumbent?

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***Abstract*** – **This note presents the consequences of output persistence being disregarded by an electorally motivated incumbent. In this case, incumbent's policies are suboptimal not only socially but also from the electoral point of view.**

***Keywords*** - *Electoral cycles, Imperfect modes, Output persistence.*

## 1. Introduction

The consequences arising from the fact that real variables, such as unemployment or output, exhibit a degree of persistence over time have been analysed since some time ago (see, e.g., Jonsson, 1997; Lockwood, 1997; Svensson, 1997; Caleiro, 2012). A particularly interesting consequence of output persistence is that it may turn upside down the political business cycle, which, in its typical form, is associated with depressions at the beginning of the mandate followed by pre-election inflationary expansions (Gärtner, 1996; Gärtner, 1997; Caleiro, 2009). Somehow related to this result is the fact that, when the rationality of the electorate is bounded, an error on the classification, by the electorate, of the incumbent's behavior, may exist, when the level of output displays persistence (Caleiro, 2013).

A recent observation of reality seems to confirm that the typical pattern of the electoral cycle seems to be so deep-rooted that an electorally motivated government, whose rationality is also bounded, considers that it must implement a (more than socially desirable) contractionary policy at the beginning of the mandate, so that, at the end of the mandate, it has (better) conditions to implement expansionary policies. A behavior of that type by the incumbent also seems to reveal that it may also act under the veil of ignorance (of the persistence in output). In other words, when determining the economic policy the incumbent may use a stylized model, this model being imperfect due to the ignorance of output persistence (Chow, 1977). In this case, incumbent's policies are suboptimal not only socially but also from the electoral point of view.

The rest of the paper is structured as follows. Section 2 offers the correct model, i.e. the one ruling the true functioning of the economy, which is based upon an aggregate supply curve embodying output persistence, as well as the imperfect model, i.e. the one considered by the incumbent, which disregards output persistence. Section 3 concludes.

## 2. The Models

Recently some authors have assumed an extended version of the standard aggregate supply curve $y_t = \bar{y} + \beta\left(\pi_t - \pi_t^e\right)$, where $y_t$ denotes the level of output, that deviates from the natural level, $\bar{y}$, whenever the inflation rate, $\pi_t$, deviates from its expected level $\pi_t^e$, by considering

$$y_t = (1-\eta)\bar{y} + \eta y_{t-1} + \delta\left(\pi_t - \pi_t^e\right), \qquad (1)$$

where $\eta$ measures the degree of output persistence. See Gärtner (1999) for an output persistence case and/or Jonsson (1997) for an unemployment persistence case.

When normalizing the natural level of output such that $\bar{y} = 0$ the aggregate supply curve reduces to:

$$y_t = \phi y_{t-1} + \alpha\left(\pi_t - \pi_t^e\right), \qquad (2)$$

where, following the hypothesis of adaptive expectations,

$$\pi_t^e = \gamma\pi_{t-1} + (1-\gamma)\pi_{t-1}^e, \qquad (3)$$

where $0 \le \phi \le 1$ and $0 \le \gamma \le 1$.

Model (2) is thus the correct representation of the functioning of the economy. When disregarding the existence of persistence in output, an imperfect model is